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Now what are the three *real* points of intersection of the asymptote with the curve? If we substitute the value of $y = -x$ in the first equation, we have

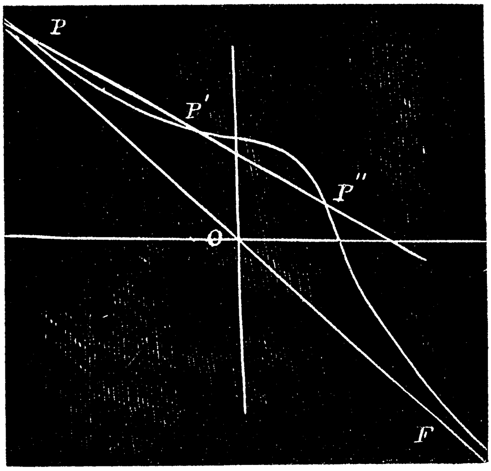
$$x^3 - x^3 = a^3, \text{ or } 0x^3 = a^3, \text{ or } x^3 = \frac{a^3}{0}.$$

What are the three roots of this equation? It may be written

$$0x^3 + 0x^2 + 0x = a^3,$$

which is said th have *"three roots, each equal to infinity"*, thus giving three points of intersection. This is to the writer *profoundly obscure.*

The line $y = nx + c$, if $c < a$, meets the curve in 3 distinct p'ts, P', P'', P'''.



If this line is very nearly parallel to the asymptote P will be very remote from the origin.

If now c decreases indefinitely, P' will approach P while P'' will recede indefinitely toward T, and the asymptote is the limiting position of $P\,P'\,P''$. Hence the line $y = nx + c$ may be said to meet the curve in two coincident points infinitely remote on one side of the origin, and at a distinct point, also infinitely remote, on the other side, if c is an infinitesimal ($c = \circ$) and $n = \pm \circ$.

Hence we adhere to the interpretations

$$\frac{a}{0} = \text{impossibility; and } \frac{a}{\circ} = \infty.$$

NOTE.—The value of Ψ, at p. 172, should be

$$\Psi = A\frac{d\Phi^2}{dx^2} + B\frac{d\Phi^2}{dy^2} + C\frac{d\Phi^2}{dz^2} + \&c.$$

The error was made by me, in copying

W. E. HEAL